Abstract

Title: Effect of the range of the shoulder joint rotation in volleyball players on the development of functional changes.

Objectives: The aim of this thesis is to confirm the presence of the glenohumeral internal rotation deficit in beach volleyball players and to determine whether it affects the development of functional changes of the shoulder joint located in the dominant upper limb.

Methods: The thesis was a quantitative study with the character of an experiment. There were 60 active volleyball players aged 18-30 years who were deliberately selected for the purposes of the study. The essence was to ascertain whether GIRD affects the pain in the shoulder joint of volleyball players and whether it was deemed positive for all participants of the study. In order to examine the range of motion, the goniometer in the external and internal rotation according to Janda and Pavla, Janda and Sachse was used, as well as hypermobility tests and a shoulder joint pain questionnaire. The statistical data processing was performed by Microsoft Excel 2010. The sum and average functions were used. Subsequently, graphs and tables were created from the results

Results: The established hypotheses were confirmed in two cases. GIRD is determined positive for beach volleyball players. From the results of hypermobility tests, it follows that out of 5 performed tests at least 3 were positive for each proband. GIRD and shoulder joint pain were detected in more than half of randomly selected probands. However, GIRD was also present in probands who did not experience any shoulder joint pain. Therefore, it appears that GIRD is not a clear symptom of pain but there are other causes as well. For example, we can name an insufficient compensation on the athlete's part, the reduced physical condition of the athlete, the possible non-treatment of previous unaware injuries, poor techniques in volleyball spike or other functional changes of the musculoskeletar system.

Keywords: shoulder girdle, beach volleyball, range of movement, functional changes, kinesiology, biomechanics, glenohumeral internal rotation deficit, pain, physical therapy, overloading in the sport, compensation